

REMARKS

Claims 1, 4-12, 15-38, and 40-109 are pending, with claims 1, 12, 20, 38, 41, 42, 44, 46, 47, 48, 49, 53, 55, 56, 67, 79, 89, 97, and 104 being independent. Claims 1, 4, 12, 15, 20, 24, 25, 38, 41, 42, 44, 46-49, 53, and 55 have been amended as they were in the reply of August 21, 2007; claims 2, 3, 13, 14, and 39 have been canceled; and claims 56-109 have been added. Support for the claim amendments and the new claims can be found in the originally-filed claims. No new matter has been introduced.

The Office has indicated that the reissue declaration is allegedly defective for failing to identify at least one error that is relied upon to support the reissue application. Applicant requests withdrawal of this requirement because the reissue declaration submitted by applicant properly identifies at least one 35 U.S.C. §251 error. In particular, the reissue declaration states (emphasis added) "that the '860 patent is partly inoperative by reason of claiming more than we had the right to claim; and that the inoperativeness is a result of error that arose inadvertently and without deceptive intention." The reissue declaration also states that "[a]fter issuance of the '860 patent, we realized that several references, which were not part of the file wrapper, may be material to the validity of at least some of the claims of the '860 patent. We believe it was an error that these references were not considered by the patent Office during prosecution of the application that matured into the '860 patent." Therefore, the declarant identified two errors that were relied upon to support the reissue application.

The Office has objected to the claims because the amendment made on August 21, 2007 was not properly formatted. Applicant is re-submitting the amendment using the proper format that is governed by 37 CFR 1.173(d). Accordingly, applicant requests withdrawal of this objection.

Claims 1, 12, 22, 44, and 56 have been objected to because the claims recite both "a waveguide region which is not intentionally doped" and "the waveguide region has a doping level of no greater than $5 \times 10^{16}/\text{cm}^3$ " and the Office argues that these two statements together make no sense. Applicant requests withdrawal of this objection because the two statements are consistent with each other. In this particular case, a waveguide region can be not intentionally

doped yet still have a doping level due to un-intentional doping. Accordingly, applicant requests withdrawal of this objection.

Claims 31, 32, 54, 55, 62, 63, 74, 75, 84, 85, 102, and 109 have been objected to because a character (μm) that was present in the original claim to represent the unit of length micrometer was somehow altered when the document was converted to pdf for uploading to EFS. Applicant has converted to pdf using a more proper conversion program and the character for the micrometer should properly appear in these claims.

Claim 46 has been objected to for including both the limitation "a quantum well region within the waveguide region for generating an optical mode of photons" and "a plurality of spaced quantum well regions within the waveguide region for generating an optical mode of photons within a barrier region between each pair of adjacent quantum well regions." Applicant has amended the claim to remove the limitation "a quantum well region within the waveguide region for generating an optical mode of photons" to clarify the claim language. Accordingly, applicant requests withdrawal of this objection.

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In conclusion, applicant submits that all claims are in condition for allowance. The fee of \$120.00 for the Petition for One Month Extension of Time to and including July 4, 2008 is being paid concurrently with the Electronic Filing System (EFS). The fee for the additional claims was previously filed with the reply of August 21, 2007. Therefore, it is believed that no fee is due in connection with the claims. Please apply all charges or credits to deposit account 06-1050, referencing Attorney Docket No. 14564-006002.

Respectfully submitted,

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